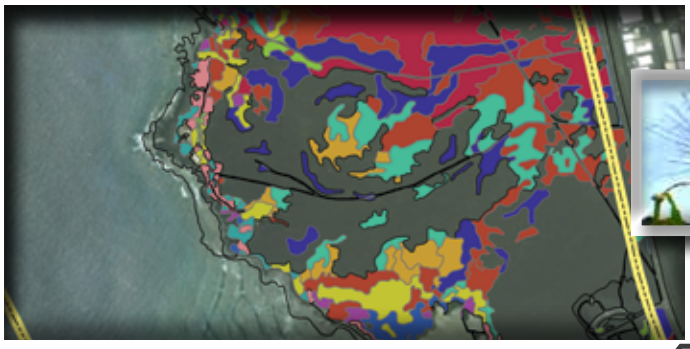
A Tale of Two Vegetation Projects

In 2011, the Inventory & Monitoring Program: (1) completed the first comprehensive vegetation mapping inventory for Kaloko-Honokōhau National Historical Park, and (2) established 15 long-term vegetation monitoring plots within the park's unique coastal strand plant community. Integrating these two vegetation data tools provides the park with a detailed picture of the condition or status of the coastal strand plant community.

The vegetation map displays the distribution of plant types within the park as a snapshot in time. Because these types were created using consistent national standards, park managers can share information on vegetation management techniques for types shared across parks. Some degraded plant associations are shared among the West Hawaii parks (e.g., the dark red polygons on the map below are kiawe coastal dry semi-natural woodlands), and others are unique to this park (e.g., the turquoise polygons are coastal strand sparse vegetation).

Long-term plant community monitoring provides detailed data on the status of vegetation and is designed to detect changes over time. Specifically, these data identify which plant species are in the coastal strand (species richness), how abundant they are (cover, density), and what size they are (population structure) every five years. In 2011, nearly half of the 31 plants identified were native, including the rare maiapilo (below). The high diversity of plant types in the coastal strand depicted by the vegetation map helps to explain the variety in vegetation among the long-term monitoring plots.

– A. Ainsworth, NPS Botanist



maiapilo

VEGETATION MAPPING

- Distribution of plant assemblages
- Comparable with other natural areas
- Depicts diversity of the coastal strand
- Prioritization of management areas

PLANT COMMUNITIES MONITORING

- Repeated status analysis
- Designed to detect change
- Relatively inexpensive
- Quantifies population structure

Coupling the finely delineated vegetation type boundaries (maps) with quantitative species composition and structure monitoring data allows a detailed snapshot of the coastal strand's current STATUS.

Consistent monitoring repeated over time provides essential tools for detecting and quantifying future vegetation community changes or TRENDS.

Together these projects provide the best vegetation information for resource managers.